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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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01/30/2001

Jong-Sung Kim

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MCKENNA LONG & ALDRIDGE LLP
1900 K STREET, NW
WASHINGTON, DC 20006

EXAMINER

DUDEK, JAMES A

ART UNIT

PAPER NUMBER

2871

MAIL DATE

DELIVERY MODE

01/22/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/771,591	KIM, JONG-SUNG	
	Examiner	Art Unit	
	James A. Dudek	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 January 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

Claim Rejections - 35 USC § 102

A person shall be entitled to a patent unless –

Claims 1-2, 4, 6-9, 11, 13-20, 22, 24 and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by US 5745207 A [207].

FIG. 4

Per claims 1-2, 4, 6-9, 11, 13-20, 22, 24, 26, 207 teaches a TFT [7] substrate [see figure 1]; a pixel electrode [4], the pixel electrodes including a zigzag pattern having a plurality of protrusions and indentations [see above figure]; a common electrode having the same shape as the pixel electrode [2], wherein a horizontal distance is substantially perpendicular to the length of the pixel electrode [see above figure] and wherein a first horizontal distance between opposing facing edges of protrusions of the pixel electrode [the protrusion closest to the common electrode] and common electrode [the protrusion closest to the pixel electrode, thus the distance is the smallest distance between the pixel

and common electrode] is less than a second horizontal distance between an inner facing edge of an inner indentation of the common electrode [the indentation apex on the common electrode exactly opposite from the apex on the pixel electrode] and an inner protrusion of the pixel electrode [the exact opposite point on the pixel].

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Onnagawa et al (US 6075582) in view of Kondo et al (US 5598285).

Onnagawa discloses an active matrix LCD comprising (see at least Figures 5-7): a pair of substrates; a pixel electrode and an opposed (counter) electrode formed on one of the substrates; a liquid crystal layer sandwiched between the substrates; an alignment layer formed on each substrate; wherein the pixel and the opposed (counter) electrodes have a zigzag pattern having a plurality of protrusions and indentations.

The limitation not disclosed by Onnagawa is “in-plane-switching (IPS)” (i.e., pixel and counter electrodes formed on the same substrate resulting in parallel field). However, the use of IPS-LCD device is known in the art for achieving advantages such as wide viewing angle (see at least Kondo). Thus, it would have been at least obvious to one of ordinary skill in the art at the time the invention was made to employ pixel and counter electrodes formed on the same substrate resulting in parallel field for achieving advantages such as wide viewing angle.

Onnagawa discloses the protrusions and indentations comprising substantially triangular shape.

Onnagawa discloses the zigzag pattern of the pixel electrode being substantially the same as the zigzag pattern of the counter electrode (see at least Figures 6-7, i.e.,

meeting the particular distances as recited in claims 1, 6, 13 & 16, e.g., a first distance between opposing facing edges of protrusions of the pixel electrode and common electrode is less than a second distance between an inner facing edge of an inner indentation of the common electrode and an inner protrusion of the pixel electrode; a distance between an apex of an inner protrusion of the first plurality of indentations and protrusions and an apex of an inner protrusion of the second plurality of indentations and protrusions is less than a distance between an apex of an inner protrusion of a first plurality of indentations and protrusions and a bottom of an inner indentation of the second plurality of indentations and protrusions).

The use of a color filter disposed on a counter substrate is common and known in the art for achieving a color display device. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ a color filter disposed on the counter substrate, as common and known in the art, for achieving a color display device

Materials such as polyimide, polyamic acid is common and known in the art for the alignment layer. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ materials such as polyimide, polyamic acid for the alignment layer, as common and known in the art.

The protrusions and indentations comprising other shapes such as substantially trapezoidal shape, substantially rectangular shape would appear to be at least obvious variations (i.e., *not patentably distinct*) to the protrusions and indentations comprising substantially triangular shape. Accordingly, it would have been obvious to one of ordinary skill at the time of invention to use one the patentably indistinct shapes to improve contrast/viewing angle.

Response to Arguments

2. Applicant's arguments have been fully considered but they are not persuasive. See rejection above. Defining the horizontal direction does not change the claimed structure.

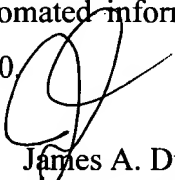
The shape of the pixels and common shown in the application drawings are not being captured by the claim language. Subject to an update search and reconsideration, if Applicant could claim the shape of the pixel and common electrode shown in Applicant's figures, the case appears to be allowable over the art of record.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A. Dudek whose telephone number is 571-272-2290. The examiner can normally be reached on 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on 571-272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



James A. Dudek
Primary Examiner
Art Unit 2871